

## SOFTWARE-TO-HARDWARE COMPILER

### Abstract of the Disclosure

5           A software-to-hardware compiler is provided  
that generates hardware constructs in programmable logic  
based on pure software constructs. More particularly, a  
high-level program language may be used to create a  
program using only software constructs that is compiled  
10 into hardware constructs. Optimizations may be made in  
the later stages of compilation to retime the circuit,  
allowing for maximum data flow. The hardware may make  
run-time decisions with respect to executing programmable  
logic blocks in parallel. The decisions may be at least  
15 partially based on a control flow.